

• • R E M A R K S • •

The Official Action of July 10, 2002 has been thoroughly studied. Accordingly, the changes presented herein for the application, considered together with the following remarks, are believed to be sufficient to place the application into condition for allowance.

In response to the Examiner's request that applicant review and revise the specification so that it complies with 35 U.S.C. §112, applicant is hereby submitting a Substitute Specification under 37 CFR §1.125(b). The Substitute Specification is believed to conform to the requirements of 35 U.S.C. §112.

By the present amendment, claims 2-6 have been corrected in response to the Examiner's rejection of these claims under 35 U.S.C. §112, first paragraph. The Examiner will note that the limitations of previous claims 3 and 4 have now been recited in claims 3 and 8, and 4 and 9, respectively, in order to avoid reciting alternative limitations in a single claim.

Also by the present amendment, claim 1, line 6 has been changed in the manner suggested by the Examiner to overcome the outstanding objection of claims 1-7.

In addition, independent claim 1 has been changed to recite that the covering member is more easily stretched out of a plane containing the covering member in the first zone than in the remaining zone, and that the first zone is adjacent the liquid-absorbent core member and at least substantially coextensive with the liquid-absorbent core member, so that pressure exerted on the covering member by the liquid-absorbent core member will stretch the first zone out of a plane containing the covering member.

This limitation is directed to the manner in which the liquid-absorbent core of the present invention can stretch the covering member out of the plane easily due to the difference in the L/D ratios of the zones (or regions A and B) shown in Figs. 2, 3 and 7 and discussed in the corresponding portions of the specification.

Independent claim 1 has further been amended to recite discrete elastic members that are provided along transversal side edges of said diaper to extend circumferentially along leg-openings that are defined when the diaper is put on the diaper wearer.

These elastic members 17 and 57 are shown in Figs. 1, 2, 5 and 6.

In addition, independent claims 7 as been amended to recite that the stretched and contracted composite sheet is incorporated as a cover member into a disposable diaper having a liquid-absorbent core member so that the stretched and contracted portion of the composite sheet is adjacent and substantially coextensive with the liquid-absorbent core member.

This limitation to claim 7 more clearly recites the manner in which the cover member is produced and incorporated into the diapers of applicant's disclosed invention.

In addition to the Substitute Specification and the changes to the claims, applicant is submitting under separate cover a Request for Approval of Drawing Amendments to which is attached photocopies of Figs. 6 and 7 with proposed drawing corrections presented in red ink.

Entry of applicant's Substitute Specification, changes to the claims, and proposed drawing amendments is respectfully requested.

Claims 1-9 are pending in this application.

On page 2 of the Official Action the Examiner objected to the Specification and requested that applicant review and revise the Specification. In response, applicant is submitting herewith a Substitute Specification which is believed to address and overcome outstanding objections and otherwise conform to the provisions of 35 U.S.C. §112.

On page 2 of the Official Action the Examiner has objected to the Figure 6, noting several instances in which reference numerals in the drawings needed to be corrected.

In response to the Examiner's objection to the drawings, applicant is herewith submitting a Request for Approval of Drawing Amendments to which is attached photocopies of Figs. 6 and 7 with proposed changes to the drawings added in red ink.

The Examiner is requested to acknowledge receipt and approval of the proposed changes to the drawings so that applicant can proceed to have corrected formal drawings prepared.

Also on page 2 of the Official Action the Examiner objected to the disclosure, noting that there are layers in Fig. 7 which do not appear to be discussed in applicant's specification.

In response to this objection, it is noted that the proposed change being submitted for Fig. 7, limits the layers depicted in Fig. 7 to those layers that are shown in Fig. 6 of which Fig. 7 is a cross sectional view.

On the bottom of page 2 of the Official Action the Examiner took the position that applicant's Preliminary Amendment to the second paragraph on page 3 of the specification introduced new matter by reciting "one process." Applicant was attempting to edit this portion of the specification and correct the syntax, without adding any new matter to the specification.

It is believed that the Substitute Specification addresses and overcomes the outstanding objection under 35 U.S.C. §132.

On page 3 of the Official Action the Examiner rejected claims 2-6 under 35 U.S.C. §112, first paragraph. Under this rejection the Examiner noted several phrases in the dependent claims which raised issues of enablement.

In response to this rejection, the claims have been amended to avoid the terms which the Examiner listed as lacking support in the specification.

Claims 1-7 stand objected to, because of the inclusion of a comma in line 6 of claim 1 rather than a semicolon.

Line 6 of claim 1 has accordingly been corrected in the manner suggested by the Examiner.

Claims 1-6 stand rejected under 35 U.S.C. §112, second paragraph. The rejection is based on applicant's use of the phrases that the Examiner listed under the rejection of claims 2-6 under 35 U.S.C. §112, first paragraph. As noted above, the claims have been amended to avoid these terms.

Claim 7 stands rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,196,000 to Clear et al.

Claims 1-6 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,846,232 to Serbiak et al.

Claims 1-6 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,847,134 to Fahrenkrug et al.

For the reasons set forth below, it is submitted that all of the pending claims are allowable over the prior art of record and therefore, each of the outstanding rejections of the claims should properly be withdrawn.

Favorable reconsideration by the Examiner is earnestly solicited.

The Examiner has relied upon Clear et al. as anticipating applicant's claim 7.

By the present amendment, claim 7 has been changed to recite the additional process step of incorporating the stretched and contracted composite sheet as a cover member into a disposable diaper having a liquid-absorbent core member so that the stretched and contracted portion of the composite sheet is adjacent and substantially coextensive with the liquid-absorbent core member.

This limitation requires that Clear et al. provide a backsheet that is a composite sheet and which is produced by applicant's recited method steps.

Although Clear et al. teach a waistband that includes elasticized panels that provide for different extension forces, the backsheet 26 of Clear et al. is not a composite sheet, and does not have discrete portions that are stretched and contracted and provided adjacent the absorbent core 28 so as to be substantially coextensive therewith.

Accordingly, Clear et al. cannot be relied upon as anticipating or otherwise rendering obvious applicant's invention as recited in claim 7.

The Examiner has relied upon Serbiak et al. as anticipating applicant's claims 1-6.

Applicant's independent claim 1 has been changed to recite that the covering member is more easily stretched out of a plane containing the covering member in the first zone than in the remaining zone, and that the first zone is adjacent the liquid-absorbent core member and at least

substantially coextensive with the liquid-absorbent core member, so that pressure exerted on the covering member by the liquid-absorbent core member will stretch the first zone out of a plane containing the covering member.

This structure and function of applicant's invention is depicted in Figs. 2 and 3 and enables a distribution of pressure that does not adversely affect the elastic members adjacent the leg-openings. That is, when the wearer's body exerts pressure on the liquid-absorbent core, the ratio of L/D in the range A allows the liquid-absorbent core member to easily displace the covering member as depicted in Figs. 2 and 3 so that no pressure is transferred so as to lessen the sealing tension applied by the elastic members near the leg-openings.

Serbiak et al. only discusses "extensible" forces and forces that cause "necking" and otherwise fails to provide a discussion or teaching as to forces that would press or push into or away from the plane of the bodyside liner layer.

Moreover, Serbiak et al. fails to teach an embodiment in which the "extensible" zone is adjacent and at least substantially coextensive with the absorbent core member - because Serbiak et al. does not require the absorbent core member to push against the bodyside liner layer, with the bodyside liner layer easily being displaced according to the present invention.

Applicant's invention addresses and solves a problem that is not recognized or otherwise appreciated by Serbiak et al.

The Examiner has relied upon Fahrenkrug et al. as anticipating claims 1-6.

Fahrenkrug et al. does not teach discrete elastic members that are provided around leg-openings, but rather relies upon the stretchability of the overall article to “conform[s] and respond[s] to the body and body geometries as movement occurs.” (Column

As stated: “Because of the generally trapezoidal shape of the undergarment 26, when it is fitted about the legs, the leg openings tend to form a generally ellipsoidal shape due to the undergarment following the natural contours of the body.” (Column 10, lines 7-11)

A careful review of Fahrenkrug et al. will reveal that this reference does not teach discrete elastic members along the leg-openings.

Moreover, Fahrenkrug et al. does not teach a first zone that has a L/D ratio that is larger than a remaining zone, wherein the first zone is adjacent the liquid-absorbent core member and at least substantially coextensive with the liquid-absorbent core member, so that pressure exerted on the covering member by the liquid-absorbent core member will stretch the first zone out of a plane containing the covering member.

Accordingly, Fahrenkrug et al. does not anticipate applicant’s claimed invention, nor otherwise recognize, address or solve the problem that applicant’s invention addresses and solves.

Based upon the above distinctions between the prior art relied upon by the Examiner and the present invention, and the overall teachings of prior art, properly considered as a whole, it is respectfully submitted that the Examiner cannot rely upon the prior art as required under 35 U.S.C. §102 as anticipating applicant’s claimed invention.

It is, therefore, submitted that any reliance upon prior art would be improper inasmuch as the prior art does not remotely anticipate, teach, suggest or render obvious the present invention.

It is submitted that the claims, as now amended, and the discussion contained herein clearly show that the claimed invention is novel and neither anticipated nor obvious over the teachings of the prior art and the outstanding rejection of the claims should hence be withdrawn.

Therefore, reconsideration and withdrawal of the outstanding rejections of the claims and an early allowance of the claims is believed to be in order.

It is believed that the above represents a complete response to the Official Action and reconsideration is requested.

The prior art made of record, but not relied upon by the Examiner on page 4 of the Official Action has been noted, but is not deemed to be particularly pertinent to applicant's claimed invention.


If upon consideration of the above, the Examiner should feel that there remain outstanding issues in the present application that could be resolved, the Examiner is invited to contact applicant's patent counsel at the telephone number given below to discuss such issues.

To the extent necessary, a petition for an extension of time under 37 CFR §1.136 is hereby made. Please charge the fees due in connection with the filing of this paper, including extension



of time fees, to Deposit Account No. 02-0385 and please credit any excess fees to such deposit account.

Respectfully submitted,

  
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Marked-Up Copy of the Claims  
As Amended on October 9, 2002

1. (Twice Amended) A disposable diaper comprising:

an elastically stretchable covering member for covering a diaper wearer's crotch and waist regions;

a liquid-pervious sheet for contacting with skin of said diaper wearer;

a liquid-absorbent core member sandwiched between said liquid-pervious sheet and said covering [member,] member;

elastic members provided along transversal side edges of said diaper that extend circumferentially along leg-openings that are defined when the diaper is put on the diaper wearer;

*per 2603* said covering member consisting of an elastically stretchable first layer and an inelastically stretchable second layer formed with a plurality of continuous fibers, said continuous fibers being fixed to said elastically stretchable first layer in at least a pair of bonding zones spaced apart from each other so that a ratio of  $L/D$ , where  $L$  is a length of said continuous fiber extending between said pair of bonding zones and  $D$  is a distance in straight line between said pair of bonding zones, is larger in a first zone on said covering member than in a remaining [zone.] zone, so that said covering member can be more easily stretched out of a plane containing the covering member in said first zone than in said remaining zone, and said first zone being adjacent said liquid-absorbent core member and at least substantially coextensive with said liquid-absorbent core member, so that

pressure exerted in said covering member by said liquid-absorbent core member will stretch the first zone out of a plane containing the covering member.

2. (Twice Amended) The diaper according to Claim 1, wherein said first zone [comprises] is a transversely middle zone of said diaper.

3. (Twice Amended) The diaper according to Claim 1, wherein said elastically stretchable first layer [comprises at least one] is formed of an elastically stretchable film. [film and a nonwoven fabric made of crimped fiber.]

4. (Twice Amended) The diaper according to Claim 1, wherein said continuous fibers of said inelastically stretchable second layer are made of polypropylene. [at least one of polypropylene and propylene copolymer.]

5. (Twice Amended) The diaper according to Claim 1, wherein said elastically stretchable first layer [further includes] is formed from a liquid-impervious sheet and lies inside said second layer.

6. (Twice Amended) The diaper according to Claim 1, wherein said elastically stretchable first layer [further comprises] is formed from a liquid-impervious sheet and lies inside said

inelastically stretchable second layer so that said elastically stretchable first layer functions as a liquid-impervious backsheet for said liquid-absorbent core member.

7. (Twice Amended) A process for making a disposable diaper having an elastically stretchable covering member for covering a diaper wearer's crotch and waist regions, a liquid-pervious sheet for contacting with skin of said diaper wearer, and a liquid-absorbent core member sandwiched between said liquid-pervious sheet and said covering member, said process comprising the steps of:

- providing an elastically stretchable first layer destined to form said covering member;
- providing a second layer formed with a plurality of inelastic stretchable continuous fibers;
- bonding said elastically stretchable first layer and said second layer together at a plurality of intermittently formed bonding zones to thereby form a composite sheet;
- stretching only a portion of said composite sheet in one direction so that said elastically stretchable first layer of said portion may be elastically stretched together with said continuous fibers; [and]

- allowing said composite sheet to contract under a contractile force of said first elastically stretchable layer to form said covering [member.] member; and

- incorporating said stretched and contracted composite sheet as a cover member into a disposable diaper having a liquid-absorbent core member so that said stretched and contracted portion of said composite sheet is adjacent and at least substantially coextensive with said liquid-absorbent core member.

New claims 8 and 9 have been added as follows:

--8. (New) The diaper according to Claim 1, wherein said elastically stretchable first layer is formed of a nonwoven fabric made of crimped fibers.--

--9. (New) The diaper according to Claim 1, wherein said continuous fibers of said inelastically stretchable second layer are made of propylene copolymers.--